

DM2002X STEREO MIXER OWNER'S MANUAL



Safety Information and Product Registration

	CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN	
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE ANY COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL ONLY. The lightning flash with arrowhead symbol within the equilateral triangle is intended to alert the user to the presence of un-insulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons. The exclamation point within the equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying this appliance.		

CAUTION
FOR USA & CANADIAN MODELS ONLY
TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

SAFETY INSTRUCTIONS

1. **Read Instructions** - All the safety and operating instructions should be read before this product is connected and used.
2. **Retain Instructions** - The safety and operating instructions should be kept for future reference.
3. **Heed Warnings** - All warnings on this product and in these operating instructions should be followed.
4. **Follow Instructions** - All operating and other instructions should be followed.
5. **Water and Moisture** - This product should be kept away from direct contact with liquids.
6. **Heat** - Avoid placing this product too close to any high heat sources such as radiators.

7. Power Sources - This product should be connected to a power supply only of the type described in these operating instructions, or as marked on the unit.

8. Power Cord Protection - Power supply cords should be routed so that they are not likely to be walked upon or pinched by items placed on or against them. When removing the cord from a power outlet be sure to remove it by holding the plug attachment and not by pulling on the cord.

9. Object and Liquid Entry - Take care that objects do not fall into and that liquids are not spilled into the inside of the mixer.

10. Damage Requiring Service - This product should be serviced only by qualified personnel. If you have any questions about service please contact **Numark** at the number(s) shown on the back cover of this manual.

11. Grounding or Polarization - Precautions should be taken so that the grounding or polarization means built into the mixer is not defeated.

12. Internal/External Voltage Selectors - Internal or external voltage selector switches, if any, should only be reset and re-equipped with a proper plug for alternative voltage by a qualified service technician. Do not attempt to alter this yourself.

NOTE: This apparatus does not exceed the Class A/Class B (whichever is applicable) limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of the Canadian Department of Communications.

WARNING: To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture. Electrical equipment should NEVER be kept or stored in damp environments.

Please record the serial number of your unit as shown on the back of the chassis as well as the name of the dealer from whom you purchased the unit. Retain this information for your records. Please return the warranty card enclosed to register your mixer with us.

MODEL: **DM2002X**

SERIAL NUMBER: _____

PURCHASED FROM: _____

DATE OF PURCHASE: _____

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NUMARK DM2002X STEREO MIXER

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CONGRATULATIONS!

You have purchased the **DM2002X** PRO MASTER MIX Stereo Mixer by **Numark**. This equipment features a completely new design and the latest in manufacturing technology to give you greater quality and better reliability than ever before. The **DM2002X** has been designed by DJs for DJs. It's the Scratch Mixers Dream Machine with absolute total mix and effect control. Enjoy your new mixer and remember:

BE CREATIVE!

Thank you for buying Numark DJ products!

FEATURES...

- *Rotatable Input Select Toggles*
- *Crossfader Reverse switch*
- *3 Phono Inputs with low-noise RIAA preamps*
- *5 Line Inputs*
- *DJ Mic Input*
- *-35DB KILL switches for Bass, Middle, & Treble on each channel*
- *Bass, Middle & Treble controls on each channel with -30dB "Cut" ability on each control for special effects and creative mixing*
- *Individual Gain Controls on each channel.*
- *User replaceable crossfader*
- *Transform buttons on Channels 2 and 3*
- *Monitor/Zone Level Control*
- *Pushbutton Cueing with PFL (pre-fader level) on each channel*
- *Send on each channel for easily hooking up an external sampler*
- *Same height as TT1700 and TT1910 turntables*
- *9.5" / 24 cm wide.*
- *Console inclined to raise above tone arm*
- *Rugged construction*
- *12V BNC light connector*

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IMPORTANT INFORMATION...

Please read this entire manual before connecting the DM2002X to your system. For optimum performance:

- Always make sure that AC power is OFF while making any connections.
- Do not use excessively long cables (i.e. over 50ft/14m) Be sure plugs and jacks are tightly mated. Loose connections can cause hum, noise or intermittents that could easily damage your speakers.
- Never use spray cleaners on the slide controls. Residues cause excessive dirt build-up and this will void your warranty. In normal use slide controls can last for many years. If they malfunction (usually because of a dirty or dusty environment) consult a professional technician.
- Never attempt to make any adjustments or repairs other than those described in this manual. Take the **DM2002X** to your dealer or to an authorized **Numark** Service Center.

A NOTE ON CABLES:

Make the input and output connections with readily available *low-capacitance* stereo cables. Quality cable makes a *big* difference in audio fidelity and punch. See your **Numark** dealer or an electronics or audio specialist store if you are not sure which cables to get.

SYSTEM PRECAUTIONS

- Use appropriate cables throughout your system: Quality shielded audio cables and terminated shielded video cables, low-capacitance preferred. Speaker cables must be 14-gauge minimum; 12- or 10-gauge is better.
- Reliability will be enhanced through the use of banana connectors on the speaker wires. Observe correct speaker wire polarity. If in doubt, consult your **Numark** dealer or a qualified technician.
- Take care to connect only one cable at a time. Pay attention to the color-coded, labelled Input and Output jacks.
- ALWAYS remember: ***“TURN AMPS ON LAST AND OFF FIRST”***. Begin with master faders or volume controls on minimum and the amplifier gain/input control(s) down. Wait 8 to 10 seconds before turning up the volume. This prevents transients which may cause severe speaker damage.
- Use restraint when operating controls. Try to move them slowly. Rapid adjustments could damage speakers due to amplifier clipping.
- **Avoid amplifier “clipping” at all costs:** this occurs when the red LEDs (usually on the front panel of most professional power amplifiers) start flashing. **“Clipping”** is when the power amplifier is distorting and working beyond it's limits. Amplifier distortion is THE major cause of speaker failure.
- To prevent fire or shock hazard, do not expose the unit to rain or moisture. **Never place cans of beer, soda, glasses of water or anything wet on top of the mixer!**

DM2002X FRONT PANEL DIAGRAM...

GUIDED TOUR OF FEATURES AND OPERATING INSTRUCTIONS...

If the **DM2002X** is your first mixer, please read this entire manual before you begin operation. If you are an experienced DJ we recommend reading the manual so you may fully appreciate this newer technology. The **DM2002X** can be 10" rack-mounted or used as a free-standing unit. Keep in mind that there are a few features you may never have seen before in a mixer of this type that you will need to read about.

INSTALLATION AND OPERATION

Study the **Connections Diagram** on page 13. First, connect all stereo input sources. Next connect your microphone(s) and monitor headphones. Make sure all faders are at "zero" and the unit is off. Finally, connect the stereo outputs to the power amplifier(s) and/or audio sources. Plug the **DM2002X** into AC power. Now you are ready to switch it on.

CHANNEL FEATURES

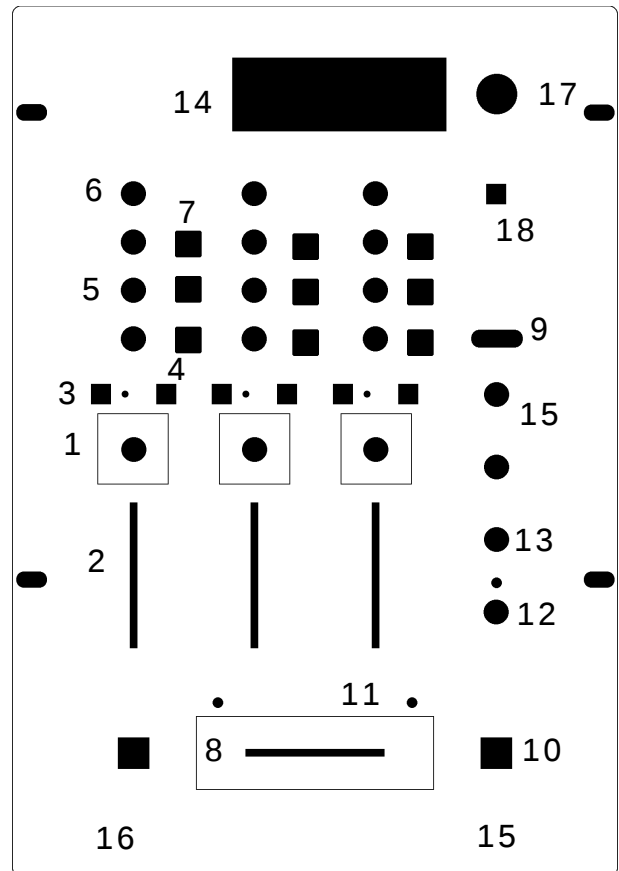
1. Channels 1, 2, & 3 Rotatable Input Toggle Switches select which source will be live to that channel based on what you have connected to the rear panel input section.

- To rotate or replace the toggle
 - a. Turn off all power!
 - b. Remove corner screws
 - c. To rotate lift of toggle and place in it's new position or to replace unplug the old unit and plug in the new one.
 - d. Screw toggle back into place.

2. The Input Faders are low-noise, low-impedance, high-quality, smooth Alps™ faders. These control individual source levels in the mix.

3. PFL and Channel Cue Assign. The **PFL** pushbuttons are used to route channel audio to the main volume meter and the **Cue Monitor Section**.

When a PFL is pressed the main volume meter changes its display to the PFL channel. This allows the DJ to accurately match levels before mixing with that channel's gain control. The idea is to properly match inputs, not the input with the output!



4. Send Buttons are for allowing a channels pre-fader output to be sent to the send connectors in the rear of the unit. These are used for sampling and other special effects. You would return the send signal through another input channel.

5. Treble, Middle, and Bass Controls are for setting appropriate equalized levels for the music you are playing. When turn all the way left they "CUT" the signal by -30dB for special effects mixing.

6. Gain Controls are for accurately matching audio levels of the channels.

7. KILL buttons are for instantly eliminating the chosen frequency area. This way you can mix the bass of one song with the treble and middle of another.

CROSSFADER SECTION

8. The **Replaceable Crossfader** achieves clean segues between the two selected input channels. "Hard left" selects Channel 2. "Hard right" selects the Channel 3. With the crossfader centered both channels are live. Use the crossfader for fast and seamless segues from one selected channel to the other.

Note: The crossfader is user replaceable in case of failure. Simply unscrew the two large screws which hold it in place, lift it out and disconnect it's cable. Re-attach the new crossfader and screw the mounting plate back onto the unit - you're back in business!

9. The **Crossfader Control** toggle allows the DJ either reverse the direction of the crossfader or turn it off. By reversing direction Channel 3 will be on the left and Channel 2 will be on the right.

10. **Transform Buttons** are for quickly reversing the crossfader direction in order to create various special effects.

11. **Beat indicator lights** show peaks in the music that usually represent a strong drum beat. You can use these to help you try and match up beat mixes.

MASTER/BOOTH OUTPUT SECTION

12. The **Stereo Master Fader** controls the overall output level.

13. The **Booth Level** controls speaker volume for a remote zone or booth monitors. If you do not use booth monitors the output can feed a tape deck, another amplifier, another mixer or a satellite speaker system.

Note: This can also be used to supply line level audio to a lighting controller or to lights that are sound activated.

CONTRACTOR'S NOTE: *Booth Level* provides zone control in installations where there are two separate rooms, or a bar and dance floor, for example. Remote zone volume should be controlled from the DM2002X.

14. **Stereo Output Level Indicator.** This fast, accurate stereo meter tracks the output level. It's OK to be occasionally "in the red" as long as +5dB or +8dB aren't constantly lit. Set the crossover, equalizer and power amp inputs to avoid distortion at each step in the audio chain. Proper attention to the meter results in the punchiest possible sound without audible distortion.

This meter is also used to monitor the PFL/CUE section. When a **PFL LED** is lit the display indicates this channel, when the **MASTER LED** is lit then the Master output is shown.

CUE SECTION

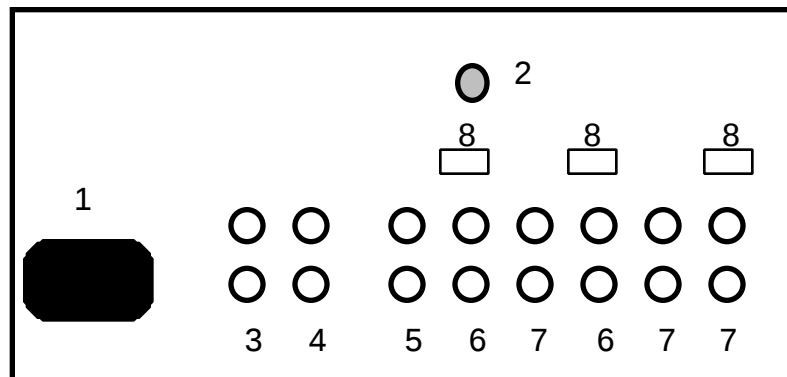
15. The **CUE** section includes the **Program Mix (PGM)** control, the **Headphone Volume** control and the **Headphone Connector** located on the front of the unit. Connect headphones with a standard 1/4" stereo plug. The **PFL** audio is sent to the headphone amp using the **PFL Assign Pushbutton** and the **PGM Mix** control. The **Program Mix** controls the amount of program audio in the headphones so that beats can be matched exactly and segues are smooth when a song is cued.

MIC SECTION

16. The **MIC Connector** is located on the front panel of the unit and is controlled through an input on Channel 1.

17. **12V BNC Connector** allows a 12 volt gooseneck lamp to be connected directly to the mixer. This light is readily available from your **Numark** dealer.

18. **Power Switch** and **Power-On LED.**

DM2002X REAR PANEL DIAGRAM...**REAR PANEL: INPUTS AND OUTPUTS**

1. **AC Connection.** Plug your power cord in here. See safety precautions on page 3 for proper treatment of the power cord.
2. **GND** is the grounding lug for all turntables. Always use this connection (your turntable cable should have a grounding wire).
3. The **Stereo Main Outputs** are low-impedance RCA connectors controlled by the **Master** fader.
4. The **Stereo Booth/Zone Outputs** are low-impedance unbalanced RCA jacks controlled by the **Zone Level** control.
5. **Send Output** is set by the send buttons pressed on the front panel. Hook up your sampler or other processor here.

6. **Channels 2 and 3 Line Inputs** are unbalanced RCA jacks. The **Line Input** is selected with the toggle switch on the front panel.

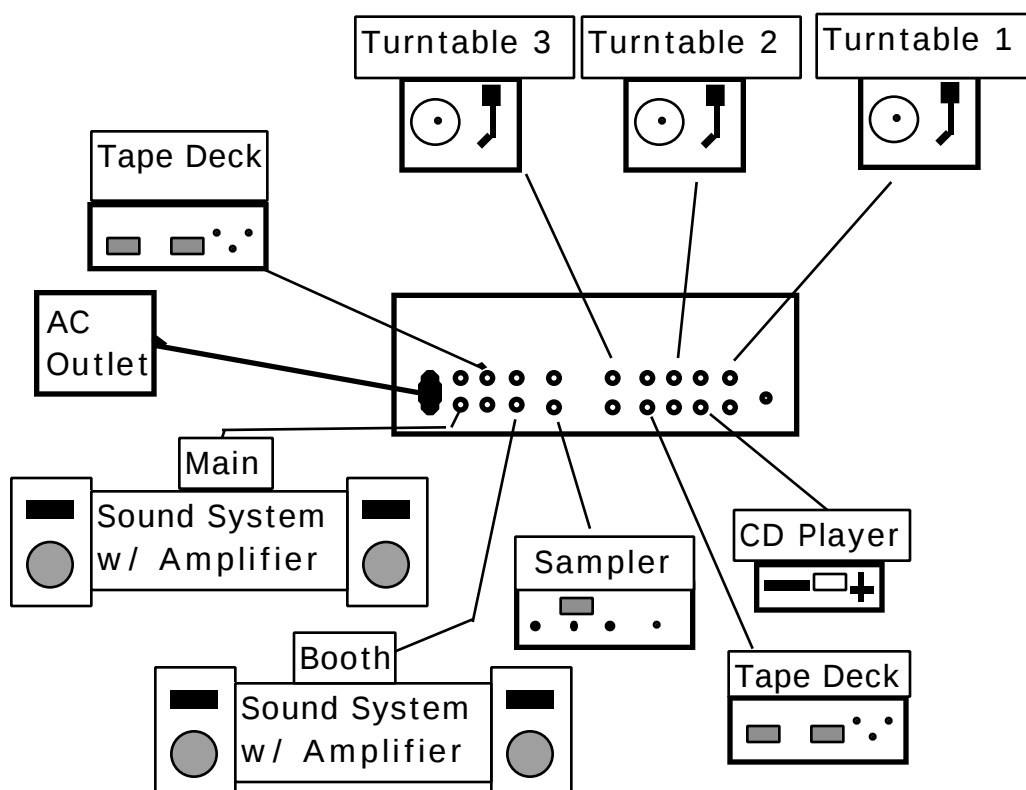
You can connect stereo audio from HiFi VCRs, cassette and reel-to-reel tape decks, DAT machines, CD players, laser discs, tuners, even synthesizers or other mixing consoles.

NOTE: Plug mono audio sources into both Left and Right inputs using a "Y" cable connector.

7. **Phono Inputs on Channels 1, 2 and 3** use unbalanced RCA jacks. Your input signal is fed directly to the **DM2002X's** high-quality RIAA phono pre-amplifiers so use this position only for moving magnet cartridges. Line level sources will overload the sensitive phono pre-amps and will sound very bad, so always be sure to toggle the line/phono switch over to line before connection of line sources.

8. **Line/Phono Input switch.** Use this to allow line level equipment to be plugged into your phono inputs giving you a total of 5 line input options.

Warning: make sure the **LINE/PHONO** input switch is set to line before playing any line input level devices through your mix

DM2002X CONNECTION DIAGRAM...

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SPECIFICATIONS...

Inputs:

- Line:** 10Kohm input impedance
100mV rms sensitivity (for 1.22V output)
- Mic:** 10 Kohm input impedance unbalanced
3mV rms sensitivity (for 1.22V output)
50mV rms max input
- Phono:** 47Kohm input impedance
1.5mV rms sensitivity @ 1KHz (for 1.22V output)

Outputs:

- Line:** 9V rms max (+20dBm)
- Headphone:** 0.5W into 47ohm
- Distortion:** less than 0.01%

Signal to Noise Ratio (vs. maximum output)

- Line:** Better than 90dB
- Mic:** Better than 84dB
- Phono:** Better than 80dB

Frequency Response:

- Mic:** 20Hz - 15 KHz +/-0.5dB
- Line:** 20Hz - 20 KHz +/-0.5dB
- Phono:** +/- 1dB except for controlled attenuation of -3dB
@ 20Hz to reduce rumble and feedback

Channel EQ:

- Bass:** +15/-30 dB @ 40 Hz
- Middle:** +15/-30 dB @ 1.36 kHz
- Treble:** +15/-30 dB @ 20 Hz

Channel KILL:

- Bass:** -66 dB @ 50 Hz
- Middle:** -31 dB @ 1.2 kHz
- Treble:** -66 dB @ 15 kHz

Power Consumption:

15 watt typical, 18 watt with full headphone output

BLOCK DIAGRAM...

Numark

Professional Disc Jockey Products

Warranty and Service Information

Numark Industries, LLC and Numark International, Inc. (hereafter "Numark") warrants each new product manufactured and/or supplied by it to be free from defects in material or workmanship under conditions of normal use and service for 1 year, beginning on the date of purchase from an authorized Numark Dealer, but not to exceed 2 years from date of shipment by Numark.

The Numark obligation under this warranty is limited to repairing or replacing, at its option, the product or part(s) therein; which upon examination by Numark shall appear to be defective or not up to factory specifications; providing the Numark product is returned (transportation prepaid) to Numark.

Numark shall not be liable for any damages, consequential or otherwise, resulting from the use and operation of this product and makes no other warranty(s) either express or implied on this product, including any warranty of merchantability.

This warranty does not extend to any of our products which have been subjected to misuse, neglect, accident, incorrect wiring not our own, improper installation, or use in violation of instructions furnished by us, nor extended to units which have been repaired or altered outside of our factory, nor to cases where the serial number thereof has been removed, defaced, or changed, nor to accessories used therewith not of our own manufacture. Numark reserves the right to make changes or improvements in its products, during subsequent production, without incurring the obligation to install such changes or improvements on previously manufactured equipment.

To place this warranty into effect, the enclosed WARRANTY REGISTRATION CARD must be returned to Numark Industries, LLC within thirty (30) days after date of purchase.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Some states do not allow the exclusion or limitation of incidental or consequential damages so the above limitation or exclusion may not apply to you.

EQUIPMENT TRANSPORT

A Return Authorization number should be obtained from Numark through the addresses or phone numbers below.

It is the customer's obligation, when returning faulty equipment, to properly pack the Numark equipment in its original packaging. Failure to do so may inadequately protect the equipment in transit and, therefore, jeopardize the customer's warranty. The defective Numark equipment should be sent, FREIGHT PREPAID with Return Authorization number to:

NUMARK INDUSTRIES
11 Helmsman Road
North Kingstown, RI 02852. U.S.A.
Attention: Service Department

Telephone: +1 (401) 295-9000
Fax: +1 (401) 295-5200
E-mail: numark@numark.com